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PRINCIPLES AND PRACTICE OF PRIMARY AND SECONDARY PREVENTION IN DEMAND REDUCTION PROGRAMMES

State of knowledge in primary and secondary prevention

Report of the Secretariat

Summary

The present report was prepared pursuant to a request made at the thirty-eighth session of the Commission for a review of the evidence available regarding primary and secondary prevention of drug abuse. Much experience has been gained, over a period of many years, regarding primary and secondary prevention approaches. A great deal has been learned in relation to the methodological issues pertaining to the measurement and evaluation of programme effectiveness. There has been a concordance of findings with regard to many approaches and, as might be expected, a picture of mixed results has evolved with regard to the effectiveness of different approaches.

Primary prevention approaches include public awareness campaigns, perinatal and pre-school developmental interventions, in-school education, youth programmes and drug testing. Secondary prevention consists of reducing drug abuse through different forms of treatment and rehabilitation. In theory, and as practised by many States, aspects of both primary and secondary prevention operate parallel to, or in conjunction with, tertiary prevention approaches aimed at reducing health risks to persistent drug abusers. Theoretical and empirical evidence suggests that the efficacy of primary prevention is increasingly being called into question, while there appears to be evidence that secondary prevention can reduce demand, and result in abstinence, under some conditions. Although they have a high relapse rate, secondary prevention strategies have been shown by different studies to be cost-effective.

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INTRODUCTION

1. At the thirty-eighth session of the Commission on Narcotic Drugs, during its consideration of the provisional agenda for its thirty-ninth session, the Commission decided that the item on demand reduction should specifically target primary and secondary prevention of illicit demand, as well as the regional expert forums on demand reduction. The present report was prepared in response to that decision.

I. CONCEPTUAL ISSUES

A. The meaning and implications of primary and secondary prevention

2. The World Health Organization (WHO) defines primary, secondary and tertiary prevention as follows:[1]

Primary prevention is aimed at ensuring that a disorder, process or problem will not occur.

Secondary prevention is aimed at identifying and terminating or modifying for the better a disorder, process or problem at the earliest possible moment.

Tertiary prevention is aimed at stopping or retarding the progress of a disorder, process or problem and its sequelae even though the basic condition persists.

3. When applied to illicit drug abuse, primary prevention is the prevention of any illicit taking of a controlled substance. It is achieved through a wide variety of measures such as: the control of the illicit supply; strengthening the individual's self-esteem and resistance to peer pressure; providing alternatives to illicit drug abuse; and educating potential illicit drug abusers about the risks and likely problems associated with these activities, in particular the potential health risks deriving from intravenous drug use.

4. Secondary prevention aims at helping people who are illicit drug abusers to stop doing so. That may be achieved in a wide variety of ways, including the provision of pamphlets on how to cope with detoxification in private, drug-free counselling, and a range of treatment regimes, followed in some cases by rehabilitation programmes.

5. Tertiary prevention is concerned with limiting or reducing to a minimum some of the worst effects of disease or, in the present case, harmful behaviour. The aim may be to limit both the extent of physical illness and criminal behaviour, by providing information and education, substitute drugs, care and counselling, syringes or bleach. This form of prevention has a parallel with that of the legal drug nicotine: it has been accepted for many years that smoking low-tar cigarettes is preferable to smoking high-tar cigarettes, although the ultimate health goal is not to smoke cigarettes at all.

6. As emphasized by WHO, there is a need for integrated policies covering all these strategies. This approach was elaborated in a note by the Secretariat on basic principles of demand reduction (E/CN.7/1995/4) and is the policy adopted by many States. The integrated approach is encapsulated in the notion that primary prevention seeks to prevent the harms that secondary prevention seeks to terminate and that tertiary prevention seeks to reduce. The emphasis of the present report is upon primary and secondary prevention; however, in describing existing integrated programmes and approaches, it necessarily touches upon aspects of tertiary prevention.

B. Causes and correlates

7. An understanding of why an illicit demand for drugs develops in some segments of the population rather than in others may be an important factor in developing preventive strategies that influence potential or actual behaviour. The reasons put forward for why an illicit demand for drugs exists are extremely numerous. This is further complicated by the fact that the reasons for first taking an illicit drug, for continuing to do so on a regular or irregular basis, for becoming dependent and for continuing to be dependent are likely to be different.[2] Regardless of whether a programme is aimed at preventing initiation or continuance, it will be predicated upon a set of assumptions which may not always be articulated, but may be inferred, and which may not always match reality. A key factor in determining the success or failure of intervention programmes is the extent to which illicit demand for drugs is understood in terms of its meaning to the individual, the immediate social network of the individual, and the broader socio-cultural setting.

8. In addition to the different stages of illicit drug use, illicit demand can be significantly influenced by the drug type, its characteristics and effects. The reasons for taking methylenedioxymethamphetamine (MDMA), smoking opium or injecting heroin may be very different. The broader socio-cultural setting greatly influences the meanings ascribed to the behaviour, such as whether it is regarded as deviant or an acceptable practice for certain groups of people. This is especially true where there are long-standing cultural norms that are opposed to, or supportive of, the taking of a particular drug. It has also been found that the motivation for the illicit abuse of drugs varies considerably from one society to another but that, even within the same society over time, demand can shift as there is variation in the composition of user groups and the meaning attributed to illicit drug abuse.[3]

9. There have been many epidemiological and aetiological studies, typically in developed countries, of risk factors, or correlates, of illicit drug abuse. In many developing countries, accounts of indigenous drug use are found in the anthropological literature.[4] The table presents the main risk factors identified to date, which

are largely in relation to adolescents but, as suggested above, can be made relevant to a wider variety of societies by differential weighting. The table also provides the "protective" factors, which relate to individuals with a lower probability of developing an illicit demand.

Risk and "protective" factors for initiation of illicit drug use among adolescents

Risk factors	*"Protective" factors*
Individual factors	
Early and persistent problem behaviours	Resilient temperament
Alienation and rebelliousness	Positive social orientation
Attitudes favourable to illicit drug use	Intelligence
Early onset of illicit drug use	Behavioural skills
Family factors	
Family drug behaviour	Cohesion, bonding or warmth during childhood
Family management practices	
Low bonding to family	
Family conflict	
School factors	
Academic failure	School commitment to its pupils and a culture opposing illicit drug use
Low commitment to school	
Peer factors	
Peer rejection in elementary grades	Association with peers who do not use drugs illicitly
Association with peers who illicitly use drugs	
Contextual factors	
Availability	Norms, beliefs, behavioural standards opposing illicit drug use
Cultural norms	
Extreme economic deprivation	
Neighbourhood disorganization	

Source: Adapted from J. D. Hawkins, M. W. Arthur and R. F. Catalano, "Preventing substance abuse", *Crime and Justice: A Review of Research*, vol. 19, M. Tonry and D. Farrington, eds. (Chicago, University of Chicago Press, 1995), table 1, pp. 371-379.

10. For any given individual, the probability of initiation into illicit drug abuse appears to increase exponentially with the number of risk factors to which he or she is exposed.[5] Consequently, while there is great variation in the influence of different factors, aggregate exposure to risk factors is held to influence the level of incidence or proportion of initiates into illicit drug use in any given population.

11. Despite research into identifying factors that correlate with illicit drug use, there are at least four specific areas in which there is a dearth of knowledge. These can be summarized as follows:[6]

(a) Those risk factors that are predictive of the various stages of illicit drug use other than initiation, including continuation, progression within drug classes, progression across drug classes, regression, cessation and relapse;

(b) Causal pathways connecting risk factors to later illicit drug use;

(c) Interaction between risk and "protective" factors at different developmental stages;

(d) Reasons why most people who experience multiple risk factors do not end up illicitly using drugs.

However, it is despite these acknowledged limitations that targeting risk factors currently forms an important part of the approach to primary prevention in many countries.

12. The notion of risk factors has led to the suggestion that illicit drug abuse can be averted if risk factors can be avoided or reduced. The implications of risk factors for the development of primary and secondary preventive approaches are outlined in the subsections on making programmes effective, contained in sections II and III below.

13. In developing appropriate drug policy around the concept of risk factors, it is important to distinguish between causes and correlates. Simply because the factors listed in the table correlate with initiation does not mean that they are causal factors. Their amelioration will not necessarily reduce the level of initiation into illicit drug abuse, the prevalence or frequency of illicit drug abuse or the risk to the health and life of the illicit drug abuser. This is evidenced by the fact that illicit use, particularly frequent illicit use, of most drugs is a statistical rarity in most populations. Many persons exposed to the risk factors or correlates of the table do not make the decision to use illicit drugs. Also, some of the risk factors, such as exposure to peer pressure, imply a deterministic process, that is, that illicit drug users play a passive role in the process. Such interpretations of risk factors may ignore the possibility that it may be peer preferences rather than peer pressure that leads to illicit drug use.[7]

14. In the context of international drug policy, it is also important to note that the list of risk factors was developed in industrialized countries. It could be applied to other countries, including developing ones, but the weighting of factors would change. To account for solvent sniffing among street children, economic deprivation might be one of the strongest risk factors. In other countries it might be the patterns of traditional use or established illicit use that are the paramount reasons for illicit drug use. Elsewhere, economic gain could be a motivation, such as when stimulants are taken by truck drivers and taxi drivers to be able to work longer hours.

15. One of the problems often associated with theories of cause and the identification of risk factors is that they tend to ignore or downplay the benefits and pleasure derived from illicit drug abuse. As discussed below this may tend to discredit the "message-giver", that is, the persons or agency conveying a primary prevention message. One way of looking at illicit drug abuse is in terms of costs and benefits, which is a reification of the decision-making process. It should also be pointed out that the benefits are not objective benefits nor are the costs always objective costs, but those as perceived by the individual. For example, *basuco* smokers or cocaine snorters may not perceive the health risks and will therefore discount them.

16. The perceived costs and benefits of the decision to use drugs illicitly vary greatly by drug type and circumstance, but within these parameters, a few generalizations are possible. Some of the perceived potential benefits include pleasure derived directly from the psychopharmacological effects of the drug; pleasure derived indirectly through the perceived improved performance of the individual in different contexts; the thrill of indulging in "risky" behaviour;[8] and the social benefits that may be derived from being associated with a group or subculture in which illicit drugs are consumed.[9] Perceived potential costs of illicit drug use include the possible health effects of acute or chronic toxicity; the risk of arrest and punishment; the effect on academic or career performance; the danger, if caught, of being expelled from school or losing a job; the risk of resultant stigma attached to the label of illicit drug user; and individual feelings of guilt about defying parents, the law or a religious code. The relative weight of each of these factors obviously varies greatly depending on the time and place, the individual and the accuracy of the information upon which decisions are based, as well as the factors listed in the table.

17. As a result of the perceived costs and benefits and other influencing factors, the decision to use illicit drugs may be made on what are essentially rational grounds within the parameters of the information

available, similar to the manner in which many people continue the use and abuse of licit substances such as alcohol and tobacco, with an acknowledgement of the potential health risks involved.[10]

C. Measuring effectiveness

18. Interventions, whether in the form of advertising campaigns, education, peer pressure, advice and counselling, treatment or rehabilitation, can be effective, but measuring the extent of the effectiveness, particularly in the short term, is methodologically complex. In some instances, evaluation has proved more costly than the intervention itself.[11] Measuring the effectiveness of an intervention that is designed to change behaviour is difficult to undertake with precision. In many instances, information relating to the array of influences upon people's lives and decision-making are neither known nor controllable. Nevertheless, because of the desire to demonstrate that money has not been wasted, measures of programme outcomes are used as an alternative indicator. Such indicators should not be confused with measures of effectiveness of the impact of a particular intervention strategy. With respect to measurement and evaluation, a Popperian paradigm is appropriate because it is often the case that, while it is difficult to measure or know what is effective, it may be possible to measure and know what is not effective.[12]

19. Experience in the area of human immunodeficiency virus (HIV) prevention and tobacco use indicates that a long-term series of interventions carrying the same message have a greater likelihood of impact than a single intervention. There has been a noticeable and measurable change in the behaviour of people injecting drugs and homosexual men in some parts of the world, where sustained interventions have taken place to prevent the spread of HIV. This has mainly been because the messages and help were delivered by credible and trustworthy sources and involved the very people who were being targeted.

20. There are several basic questions that can be asked of any intervention, including whether it has reached the intended audience and, if so, whether or not the message has been understood. If the message has been understood, then the question arises as to whether it has been believed, whether services that are provided have a clear target population, whether it is the most appropriate target population and whether it has been reached. Such questions delineate many of the areas that are prerequisites to the implementation of an approach, subsequent to which its impact upon behaviour would be evaluated. The evaluation of effectiveness can be particularly problematic in instances where universally agreed criteria do not exist for the determination of effectiveness, such as in the measurement of treatment effectiveness.

21. Two indicators are often used to justify drug prevention programmes. These are the number of people reached by the programme and the amount of information imparted to the recipients. Neither indicator measures programme effectiveness. Many programmes, such as national advertising campaigns and drug education programmes in schools, are proclaimed a success if they reach, or are known by, a large number of people. However, with regard to effectiveness, most national drug advertising campaigns fail if their intention is to change behaviour, primarily because they are too broadly targeted. They may, however, have alternative, unarticulated goals, such as raising public awareness about the extent of illicit drug use, the danger to children and young people and the need to do something about it such as providing treatment facilities. In many societies scarce resources are channelled into health and social problems that are more pressing than illicit drug use. Even in highly developed countries, the use of limited public resources for people who are seen as lawbreakers and the architects of their own problems is not always universally popular. Thus, some national campaigns may have the overt point of trying to prevent illicit drug abuse, but have a secondary objective of persuading a reluctant public of the importance of spending money to help illicit drug abusers.

22. Research suggests that increasing the information that people have does not affect behaviour. Having more information does not mean that young people will take decisions in accordance with the views of the providers of that information.

23. There is a considerable wealth of literature on evaluating treatment.[13] Many of these evaluations are contradictory in their outcomes. This is because the classical design for testing differences between different treatments (random assignments to treatment and non-treatment groups) cannot be used for ethical reasons. Even in the few cases where it has been effective, the numbers have generally been too low or the sample too unrepresentative to draw firm conclusions.[14] It has also been noted that evaluation studies continue to suffer from massive design problems.[15]

24. Many studies compared within-treatment conditions, thereby testing patients on a number of variables (such as extent of illicit drug abuse, amount of crime committed, employment record, health status) before entering treatment, during treatment and after treatment.[16] This methodology, however, has been subject to criticism on the basis that the period immediately before treatment is when the drug-dependent person will score higher on a number of measures than he or she would have, say six months previously.[17] There have been some attempts to overcome this problem using a longitudinal approach, but the cost of this methodology is great and the difficulties involved in long-term follow-up are considerable.[18] A related factor is that, while there is a growing convergence as to which core indicators should be included in evaluations, there is still no consensus.[19]

25. Apart from methodological issues, there are also issues concerning the goals of treatment. The goal of abstinence as a single or overriding goal has been discussed extensively in the literature.[20] It has been suggested, however, that "getting addicts completely off opiates, or all illicit drugs, is only one criterion of success. Their criminal behaviour, psychiatric difficulties, or other aspects of their lives cannot be ignored. As a consequence of diverse lifestyles and attendant problems, it is necessary to measure improvement in a number of respects ... To the extent that a treatment modality produces improvement, it is more or less effective. Consequently, treatment effectiveness is not a matter of success or failure, but a question of how much improvement, for how many patients, over how much time."[21]

26. As soon as intermediate goals and outcome measures other than immediate cessation of illicit drug abuse are used, then the discussion becomes one of using the concepts of tertiary prevention. In reality there is a continuum from primary through secondary to tertiary prevention. Whether acknowledged or not, there are many benefits to the individual and the community that can be achieved on the road to achieving a drug-free state. In pursuing, in all circumstances, a goal of being drug-free, there is a danger that many of the other benefits of the intervention are overlooked and that an intervention may be judged as unsuccessful when it in fact achieved a great deal, be it only for a short period of time.[22] Data from the United States of America, where perhaps the most research in this area has been conducted, show that there is an overall relapse rate of 80 per cent after three months of ceasing treatment. This could equally be interpreted as a success rate of 20 per cent, with individuals needing repeated treatments, but it is also possible that during the treatment period and the time prior to relapse, there are distinctive benefits for the individual and society.

II. PRIMARY PREVENTION

A. Making programmes effective

27. The principles outlined above dictate that primary prevention must be tailored to specific drug types in specific contexts. For example, a campaign that either explicitly or implicitly groups cannabis smoking with intravenous heroin injection loses the credibility of the message since it is widely known that the two entail different potential morbidity and mortality risks.

28. The first principle in making programmes effective is that they should relate to the needs, beliefs and perceptions of the target audience. If programmes or policies are out of touch with the group of people whose behaviour they are to influence then it is not surprising if they are ineffective.[23] There are difficulties in gaining access to some illicit drug abusers, but these are not insurmountable.[24]

29. Once the target population is known, one approach is to try to ameliorate many of the risk factors listed in the table. This is commonly accepted as a goal of educational, welfare and other areas of social policy, regardless of drug policy objectives. These would include early and persistent problem behaviour, alienation and rebelliousness of the individual, family management practices, low bonding to family, family conflict, academic failure, low commitment to school, peer rejection, extreme economic deprivation and neighbourhood disorganization. As such, they do not lie solely within the domain of drug policy. For example, many of the risk factors that correlate with an illicit demand for drugs correspond with those identified by research into juvenile delinquency and "criminal careers" for some types of crime. With respect to the development of primary drug prevention programmes, it is significant that recognition of correlates of initiation does not necessarily make them appropriate as factors to be targeted by drug policy.

30. Within the parameters and acknowledged difficulties outlined above, a range of primary prevention programmes have been developed. Reducing risk factors, as well as increasing preventive factors, is an attractive starting-point for the development of preventive interventions. The basic principles for designing primary preventive interventions are as follows:[25] (a) focus on known risk factors; (b) when reducing risk, enhance known protective factors; (c) address risk and "protective" factors at appropriate developmental stages; (d) intervene early, before the target behaviour stabilizes; (e) include those at high risk; and (f) address multiple risk factors with multiple strategies. The principles are briefly described below. Some or all aspects of this framework are implicit to many of the efforts to date in primary prevention.

B. Types of programmes

1. Public awareness campaigns

31. The use of the mass media for spreading information and propaganda has an impressive and well-documented history in changing attitudes and behaviour across a range of areas of public life. Effectiveness need not necessarily be based upon the provision of a rational argument or correct information. The bulk of evidence in relation to political history and the advertising industry suggests that programme effectiveness is determined by five criteria: the credibility of the message; the credibility of the message giver; the means of message delivery; the absence of a strong countervailing message; the absence of alternative sources of information that might contradict the propagated message. The importance of each factor varies according to circumstance.

32. Public awareness campaigns are aimed at changing social norms related to illicit demand. The principal technique of public awareness campaigns for both primary and tertiary prevention is dissemination of information via media advertisements, including on television, radio and public notice-boards, and in newspapers, magazines and information leaflets. Both the requirement for, and the capacity to implement, such programmes are dependent upon local circumstances, which vary greatly from State to State. In terms of achieving prevention objectives, it does not necessarily follow that public awareness campaigns are wholly educational or factually correct.

33. Most primary prevention campaigns have to compete in the same arena as cultural and other influences that stimulate or condone illicit demand. The frequent association of illicit drugs with media personalities, such as popular artists, can make them appear attractive to potential illicit drug users through association with the positive qualities of the personalities involved. Similarly, equipment and expertise required for illicit production are widely disseminated. Hydroponic growing equipment is openly advertised since it has licit as well as illicit uses. "Recipe books" for amphetamine-type stimulants and "home-grown cannabis tips" are examples of information that are increasingly becoming widely available through the electronic media or in published book form. Both proponents and opponents of illicit drug use can adopt a proselytizing position. When combined with the economic incentive underlying the traffic in and sale of illicit drugs, it seems that information outlets promoting illicit drug use are likely to continue, possibly expanding in line with the global spread of such technology and access to information.

34. It has been suggested that public information campaigns have, in some instances, had an effect that is the reverse of the one intended, as in the United Kingdom of Great Britain and Northern Ireland, where the "Heroin screws you up" campaign, promoted across a range of public media, was independently evaluated to have had no preventive effect.[26] The possibility that public awareness, educational or other material designed to prevent or reduce illicit demand may draw attention to the availability and means of abuse of prohibited drugs within certain segments of the population is a difficult issue that remains to be resolved.

35. Some survey indicators from the United States suggests that there has been an overall reduction in demand in the past few years within some segments of the population.[27] Whether these can be explained in terms of an impact of primary prevention measures is, however, an unanswered question, as it has been suggested that a variety of factors may have been of influence, including reductions in the willingness of survey respondents to report illicit drug abuse.[28] Simultaneously, other indicators have suggested increased illicit demand within drug-abusing segments of the population.[27] There have been more general moves towards healthier lifestyles, reductions in licit nicotine consumption and aggregate changes in lifestyle that may have indirectly influenced the perceived attractiveness of illicit drug use. Aggregate shifts towards healthier lifestyles, including reduced nicotine consumption, reduced consumption of meat and increased physical activities, may also have been interpreted by some as requiring reduced consumption of illicit drugs.

2. Perinatal and pre-school developmental programmes

36. Perinatal and pre-school programmes designed to target specific risk factors have recently been promoted as a means of reducing illicit demand among children later in life. In general, however, they target the more general rather than drug-specific risk factors. Consequently, rather than being specific to illicit drug abuse, they attempt to ameliorate factors identified for targeting by social policy initiatives, such as social deprivation, child welfare, health and educational issues. While there may be a fairly general consensus about improving these social problems, if not about the means to achieve this end, the objective of preventing the onset of illicit drug use forms only a relatively minor component.

37. Perinatal programmes involve interventions focused upon pregnant women and neonates that are designed to reduce illicit drug use among the children concerned many years later. This involves targeting risk factors such as economic deprivation and influences upon the health and development of children. In addition, prenatal exposure to illicit drugs and factors such as premature birth, low birth weight and poor relations between the child and care-giver in early childhood have been identified as problematic in relation to later development and, consequently, as precursors of the risk factors listed in the table above.[29] Pre-school interventions involve reducing risk and enhancing protective factors in early childhood. These include promoting learning, language and social skills needed later in school.

38. The number of statistically adequate evaluations of these approaches to date is limited. To some extent this is because of the long follow-up period required to measure whether developmental interventions have an impact, over a decade or two later, upon the illicit drug use of the children involved. However, the absence of evaluations may also reflect the fact that the prevention of illicit drug use is often only a secondary aspect of more general social improvement programmes. There are recorded instances of pre-school interventions that have reduced risk and improved social behaviour in schools, but these have not, to date, even been evaluated in terms of their impact upon illicit drug use.[30] While improvements in perinatal services and pre-school education may be meritorious, the mechanism through which illicit drug use in adolescence or later is prevented is weak because of the influence of a vast array of mediating variables in the intervening years.

3. In-school education

39. In-school education typically provides two types of approaches to the problem of illicit demand: providing information with a view to changing attitudes and then behaviour; and providing support for the

individual in order to enable him or her to develop skills for coping with life and resisting peer pressure to take drugs.

40. The fear or shock tactics that were once employed have now largely been abandoned because they have proved to be counter-productive. The credibility of the information giver is compromised if the information is known to be inaccurate when comparisons are made with information and knowledge of the recipient, and so the message and all future messages are then disregarded. The more prevalent the abuse of drugs by young people, the more the fear approach will rebound because they have access to alternative sources of information. The provision of information alone does not appear to affect drug-abusing behaviour. Other approaches include refusal skills, social skills and decision-making skills, and the enhancement of self-esteem. In addition there has been the promotion of alternatives, that is, the provision of activities that compete with illicit drug abuse for excitement.[31]

41. There has been a steady increase in the number of in-school drug education programmes and a gradual shift in their focus, away from specific isolated talks from outside experts and towards teacher-led programmes that address the issues of healthy lifestyles, where illicit drug use is put into a wider context. Simple information programmes have been shown to be ineffective. Research in various countries has consistently demonstrated that increased knowledge has virtually no impact on substance use or on intentions to engage in tobacco, alcohol or drug use in the near future.[32] The broader approach to drug education has shown that it is possible to delay the onset of first drug use, which is strongly related to the development of more frequent later use that becomes problematic in health terms. It has been suggested, for example, that tobacco, in particular, appears to be an important drug that may well act as a gateway or entry point for drug use further along the developmental continuum.[33]

42. Many school-based prevention programmes have been hailed as effective. An analysis of two large-scale evaluations of social influence programmes, the life skills training programme and the WHO collaborative study, concluded that it could not be assumed that a statistically significant difference observed at follow-up between an intervention group and a control group was necessarily of any practical significance.[34]

43. A meta-analysis of 143 adolescent drug prevention programmes found that peer-led programmes were superior to other approaches. Peer programmes produced the only results that showed change towards the ultimate aim of reducing drug-abusing behaviours. It was found that the assumption on which most drug education programmes were based, namely that in order to change behaviour attitudes needed to be changed, was not confirmed. Drug use patterns changed without a concomitant change in attitudes.[35] It seems that a drug education programme combining both peer-led, developmental skills and educational approaches yields promising results.[33] In the development of peer-group leader programmes to tackle illicit demand for amphetamines in the United Kingdom, while in an out-of-school context, it was found that peer-led programmes might be successful as a means of deterring the use of heroin, or the transition to injection, but that peer interventions were much less likely as a means of primary prevention.[36] That finding suggests that serendipitous gains, in terms of the goals of tertiary prevention, may be derived from such an approach.

44. There is conflicting evidence concerning the efficacy of alternative activities as a substitute for illicit drug abuse. Despite particular suggestions that it is ineffective, the meta-analysis concluded that such activities were successful for special population groups; they were intensive and involved costly programming, but they did change the behaviour of a nearly implacable population.[35]

45. In the United States, the Drug Abuse Resistance Education (DARE) programme may hold many important lessons for in-school primary prevention. Specially trained police officers are employed to educate schoolchildren in strategies to resist initiation into illicit drug use, influencing their attitudes, beliefs and behaviour.[37] The primary objective of the DARE curriculum is to teach peer resistance skills by offering students a package of strategies to say "no" to drugs. Created in 1983 at Los Angeles, the DARE programme has spread to all 50 states in the United States and to six other countries. Its rapid growth indicates how it

has widely been accepted as the state of the art in primary in-school prevention; several preliminary evaluations, which were widely publicized, yielded favourable results,[38] including evaluations of specific projects such as project SMART[39] and project ALERT.[40] Many of the preliminary evaluations of DARE that had shown favourable results are now known to have embodied limitations because of a variety of methodological problems, such as those described earlier in the present report in relation to measuring effectiveness. In an evaluation in 1994 it was noted that, "generally speaking, the methodological weaknesses have been substantial and include the use of non-randomized designs, the absence of pretest measurement, small sample sizes, unreliable measurement, and a lack of statistical controls in the analysis".[41]

46. The large sample size employed in a later longitudinal randomized experiment has the status of being probably the most statistically powerful and sophisticated evaluation of the in-schoo! primary prevention approach to date. The independent evaluation, published in 1994, concluded that, contrary to popular belief and theory-based prediction:

> "The effectiveness of the programme has yet to be demonstrated ... DARE had no statistically significant main effects on drug use behaviours and had few effects on attitudes or beliefs about drugs."[42]

47. A review of drug education in over 100 schools in Scotland drew similar conclusions on much of the work in the United States. The evaluation report concluded: "A series of process measures suggested that pupils have some positive perceptions of drug education. However, the outcome measures showed little impact of drug education."[43] At the same time, the report also concluded that, "nonetheless, it is worth noting that for the bulk of the pupils in the study illegal drug use was not part of their lives ... It is also important to note that drug education was not associated with increased drug use on any measure".[43]

48. The conclusions on the work with respect to in-school primary prevention were that it might benefit from being more focused upon factors directly relating to illicit drug use rather than more general social skills and self-esteem training, since the broad variety of approaches might water down rather than enhance resistance strategies. In practice, however, it is possible that other aspects of such an approach that are not specific to drugs may achieve the additional objectives of social and educational policy. In one evaluation it was also noted that positive outcomes were not guaranteed merely because a programme was pro-social in nature, with wide support and extensive investment of resources.[44] Where there is an absence of a coherent policy, teachers may end up by adopting innocuous, and even counter-productive, prevention practices.[45]

49. In-school drug education programmes experience some difficulties with respect to targeting the population most likely to undertake illicit drug use. There is evidence that truants are also more likely to engage in illicit drug use, as well as other forms of juvenile delinquency, which poses methodological problems for school surveys of illicit drug use, as well as for interventions. If those most at risk are not in school then school programmes may appear to be effective because those most likely to use drugs illicitly are not part of the school programme.

4. Youth programmes

50. Components of youth programmes that relate to awareness-raising and the education of youth with respect to drug issues are covered elsewhere in the report. Consequently, the focus of the present subsection is upon the diversionary aspect of youth programmes designed to reduce the opportunity for drug abuse by increasing the proportion of time spent in alternative, licit activities. The main problems faced by this approach are that the preventive mechanism is not focused upon the target population or is not sufficiently powerful to reach the goals of primary prevention.[46]

51. Many youth programmes, such as youth centres and extracurricular sporting or other activities, are general rather than focused in their approach. Without distinguishing between high-risk and low-risk youth, the bulk of resources are expended upon those who, even without the approach, would not have generated any illicit demand for drugs. Furthermore, those youth who were most at risk were also those who were least likely to enter into youth programmes.

52. Where alternative programmes target special population groups, however, their success rate is high, equal to the peer-led programmes and with better results than conventional drug education programmes.[35] The successful programmes are those that have been individualized to meet the needs of each client and those that have included activities to enhance personal competence, such as reading skills and job skills, as well as physical adventure.

5. Drug testing

53. Four principal reasons for using drug testing as a means of determining whether a person has taken illicit drugs are to deter, to check compliance, to test competence and to measure trends in demand. It is believed that if there is a testing programme then illicit drug abuse will be deterred, particularly if it affects employment status. Drug testing can therefore be classified as both primary and secondary prevention since it may deter initiation and encourage cessation. It can also check compliance with a treatment regime and test for competence in operating machinery or vehicles. The latter is deemed most important where the competence of the operator will affect many other people, as in the case of airline pilots, sea captains, bus drivers or anyone who has the care of others under their charge. Whether or not the tests deter is a matter of great controversy.[47] The most intensive and successful testing programme has been in the United States navy,[48] but whether this would apply to other populations, particularly prison populations, is another matter.[49]

54. Some drug testing techniques have been the subject of debate regarding reliability. Most are initially of the immunoassay type, which can only be verified by gas chromatography coupled with mass spectrometry.[50] This is not frequently done, particularly because of the cost involved, and so decisions are taken on the basis of testing that can yield false positive information, that is, the incorrect identification of some persons as illicit drug abusers.

III. SECONDARY PREVENTION

A. Making programmes effective

55. Rather than one form of a programme being more effective than another, there is growing evidence that it is fitting the programme to the needs of the individual and the quality of service delivery, rather than the type of service, which brings about effectiveness. Thus, the flexibility of the programme, the quality of the staff and the morale of patients and staff may have a greater influence on outcome than the actual nature of the service delivered.[51] There is also the perennial problem of determining what is effective. There are no agreed measures of success. Many treatment programmes count as successfully treated any patients who complete their time in treatment; thus, if the patients are drug-free on the day that they leave the programme, they are counted as being successfully treated. Other regimes only define a treatment as successful if the patient is drug-free for a specified time period. Again, there is no agreed length of time. Some follow-up studies take three months, others six months and yet others three years. Nor is there agreement as to what behaviour constitutes success. For example, if a person had been through a detoxification programme for addiction to heroin, but afterwards smoked cannabis, would that be a success or failure? If, alternatively, the person became a heavy alcohol drinker, would that constitute failure?

56. The treatment and rehabilitation modalities of secondary prevention were developed primarily in relation to licit and illicit demand for opiates, notably heroin. More recently, secondary prevention approaches have been used in relation to reducing the illicit demand for other dependence-inducing drugs where a drug-dependent population can be identified. It is important to note that the bulk of the illicit demand for some prohibited drugs, such as cannabis, lysergic acid diethylamide (LSD) and the MDMA "ecstasy" group, is not covered by the secondary prevention approach. For such drugs, reduced consumption is usually aimed at tertiary prevention approaches that highlight the possible negative health consequences related to acute and chronic toxicity that may stem from binging, frequent and continued illicit consumption.

57. The implementation of treatment and rehabilitation is dependent upon reaching the target population of illicit drug users. The typical channels of access are through the medical system, via doctors and hospitals with whom illicit drug abusers have contact. Outreach and community work is also used to make contact with users and is sometimes combined with tertiary prevention activities. There is evidence that outreach work based on tertiary prevention may reach more marginalized segments of the population, with a higher prevalence of intravenous use.[52] It is therefore possible that, in some instances, the credibility of tertiary prevention techniques that seek to help reduce the health risks to individual users may provide an inroad or gateway for the implementation of secondary prevention aimed more directly at reducing the level of illicit demand.

58. A recent independent study examined the cost-effectiveness of prevention programmes, notably outpatient and residential treatment programmes, in relation to supply reduction strategies as a means of reducing illicit consumption. Cross-strategy comparative analysis has been hardly utilized in many areas of drug policy. The limited evidence available suggests that this may prove a promising avenue of investigation. The study concluded that the least costly supply-control programme (domestic enforcement) cost 7.3 times as much as treatment to achieve the same consumption reduction.[53] While the state of knowledge in relation to this particular analytic perspective is currently limited, it may in future years provide an interesting vein for the analysis of resource allocation with respect to prevention and supply reduction activities at the national and international levels.

B. Types of programmes

59. Treatment for illicit drug users is varied, ranging from methadone maintenance (or long-term detoxification), detoxification, therapeutic communities, drug-free counselling and Ayurvedic medicine to acupuncture. The effectiveness of treatment is highly dependent on tailoring the treatment to the needs of the patients, both in terms of the type of drug being illicitly used, the pattern of illicit use (occasional versus dependent, oral versus injecting illicit drug use), the needs of the individual and the cultural setting in which the illicit use occurs. The type of treatment available is usually dependent on what is culturally acceptable and who or which professions are charged with the management of the problem. In countries where psychiatrists are responsible for treatment, psychotherapeutic approaches and medical models prevail; where dependent illicit drug use is regarded as a result of a spiritual condition, greater emphasis is put on this aspect of human behaviour.

60. It is generally acknowledged that there are different approaches that are relevant for the non-dependent and the dependent drug user. The dependent drug user suffers from a chronic relapsing condition, involving biological, socio-cultural, economic and psychological factors that all contribute to drug abuse.[54] The treatment of illicit drug use is thus not a simple medical issue but involves a wide spectrum of social considerations.[55] The initial part of the present subsection presents a discussion of treatment techniques that have evolved in developing countries, for which there is a relative dearth of statistically adequate evaluations available; the bulk of the subsection presents a discussion of alternative pharmacological choices to proscribed drugs. These are followed by a short subsection on rehabilitation.

61. As with many aspects of drug policy, the variety of prevention approaches in developing countries that have been comprehensively evaluated are less numerous than those in developed countries. There is consequently somewhat of a dearth of knowledge regarding the nature, impact and effectiveness of the wide variety of treatment approaches that exist. Traditional medicines, the content of which varies with culture and context, are used in a number of countries. Independent reports have noted that Ayurvedic medicine has been used in some instances in India.[56] In other countries, such as has been independently reported in Malaysia, traditional healing as a means of treatment of dependence is sometimes based on beliefs that persons are vulnerable to supernatural influences, as well as physical causes, which increase the probability of dependence arising.[56] In such instances, traditional healers focus upon the well-being of the individual, and detoxification involves the use of herbal medicines, physical exercise and the promotion of physical health.

62. The role of acupuncture in the treatment of dependence has become more widespread in recent years. In the detoxification process for opiates, acupuncture has been used in, *inter alia*, Hong Kong and Viet Nam, and reputedly in the United States.[56] Traditional Chinese acupuncture techniques have been used extensively in some areas of the United States for several years, where it has been suggested that acupuncture relieves withdrawal symptoms, prevents the craving for drugs and increases the rate of participation of patients in long-term treatment programmes. The best results have been obtained in an open-group setting using acupuncture points in the external ear with needles without electrical stimulation.[57] There is related literature on the use of meditation techniques in treatment.[58] In other settings, and in other States, including India, yoga and meditation have been utilized as part of behavioural treatment and rehabilitation programmes, with the aim of assisting relaxation and aiding the development of a positive physical and mental approach during the treatment and rehabilitation process.[59]

1. Opioid alternatives

(a) Methadone

63. The first documented clinical trial in which methadone hydrochloride was used for treating heroin addicts was published in 1965.[60] Subsequently, methadone was gradually introduced as an alternative to heroin for the treatment of heroin-dependent persons. Overwhelmingly, both for withdrawal and long-term maintenance, methadone is currently the main drug used by physicians to treat heavily dependent persons in developed countries. A recent detailed study on the effectiveness of methadone maintenance supported the findings of a large number of already conducted studies, concluding that "methadone maintenance treatment is effective in reducing drug abuse, crime, and other deviant behaviour among patients who stay in treatment."[51]

64. In the study cited in the previous paragraph it was also noted that there was enormous variation between methadone maintenance programmes, the prescription of methadone being the only common factor. There are variations in the addicted patients, the nature of the programme, the actual services provided and patient outcomes. However, programmes in which prescribing was embedded in broader treatment, care and rehabilitation programmes were found to be more effective than programmes in which that was not the practice.

(b) Levo-alpha-acetylmethadol

65. Levo-alpha-acetylmethadol (LAAM) has also been examined as an alternative to the prescription of methadone since the 1960s. In the United States, LAAM was formally approved as a drug for the maintenance treatment of opioid dependence in 1993. "LAAM is a synthetic opioid analgesic with actions qualitatively similar to morphine that affects the central nervous system and smooth muscle. As with opioid agonists, principal actions include analgesia and sedation. Tolerance to these effects develops with repeated use. An abstinence syndrome generally occurs on cessation of chronic administration of LAAM similar to that observed with other opioids, but with slower onset, more prolonged course, and less intense symptoms ...

The opioid effect of LAAM is slower in onset and longer in duration (up to 72 hours) than that of methadone (24 hours)."[61]

(c) Buprenorphine

66. One new substitution agent currently being investigated for use in opioid addiction is buprenorphine. It is a partial agonist at some opioid receptors and an antagonist at another. It is a highly effective analgesic, 25-40 times more potent than morphine. There have been a number of studies comparing the use of buprenorphine with that of methadone in double-blind trials. The conclusions were that "for patients who require long-term maintenance treatment, many will do well on buprenorphine"[61] but that it was not suitable for all patients, particularly those with a high level of tolerance.

(d) Substitution pharmacotherapies for opioid addiction

67. One of the main reasons for choosing one drug rather than another is the length of time during which it is most effective, an indicator of which is its half-life. The half-life of a drug provides a measure of irreversible drug loss from the blood.[62] When heroin is absorbed into the body it is metabolized into monoacetylmorphine and morphine: the half-life of heroin is 3 minutes; that of morphine, 2-3 hours. Methadone has a half-life of 10-25 hours, with a mean of 15; however, after long-term maintenance this rises to 13-55 hours, with a mean of 30. It follows therefore that methadone needs to be administered less frequently than heroin. If the drugs are to be administered intravenously, the number of daily injections needed will be three or four for heroin and one or two for methadone, given equivalent dosage levels. Physical damage, especially where the patient is self-injecting, is therefore reduced with methadone. Methadone is said not to produce a "high", which the addict would get by using heroin. The half-life of LAAM is between 30 and 65 hours, with a mean of 50, which is one reason why there has been so much interest in this drug. The half-life of buprenorphine is 4-6 hours.[63]

2. Non-opioid alternatives

(a) Ibogaine

68. Ibogaine is one of the psychoactive indole alkaloids found in the western African shrub *Tabernanthe iboga*, and numerous anecdotal observations have claimed that it possesses "anti-addictive" properties. It is claimed that this is a rapid and easy means of interrupting addiction not only to opiates, but also to cocaine, amphetamine, alcohol and nicotine and polydrug dependency syndrome. Preclinical studies demonstrating that ibogaine reduces self-administration of both cocaine and morphine and attenuates the symptoms of morphine withdrawal support this hypothesis.[64] At present ibogaine is also being used on an experimental basis. The same studies conclude that although the efficacy of the drug cannot be rigorously assessed in the absence of appropriately controlled studies, interest in ibogaine as a treatment for addiction has increased.

(b) Naloxone and naltrexone

69. Other alternative treatments have been tried, such as the use of drugs that have the power to reverse opiate effects, the antagonists, such as naloxone and naltrexone. A few experiments with naloxone have not yielded conclusive results, but naltrexone appears to be a useful adjunct to treatment for specific groups of people, such as recovering physicians and others in professional occupations as well as people with higher socio-economic status. Naltrexone can only be administered to people without any opioids in their system; therefore it cannot be prescribed for those first seeking treatment. The patients need to be drug-free for 5-7 days for heroin and for 10-14 days for methadone. It has been suggested that the success of naltrexone in keeping those with higher social status from relapsing is partly due to the negative consequences that will result from readdiction.

(c) Clonidine

70. Clonidine is an alpha-adrenergic agonist that suppresses opioid withdrawal. It can be used for short-term opioid detoxification. "The role of clonidine for the treatment of opioid addiction is limited to the first several weeks of withdrawal. Clonidine cannot be considered a sufficient treatment for opioid addiction because relapse rates following all forms of detoxification are extremely high. Clonidine can only be viewed as a transitional treatment that can be used in situations where methadone is unavailable, unacceptable or inappropriate."[65]

(d) Other drug treatments

71. Sometimes, in order to ease the problems associated with the withdrawal syndrome, such as insomnia, other medicines are prescribed, such as benzodiazepines, but usually only for a short period of time.

3. Drug-free treatments

72. Drug-free treatments include therapeutic communities and out-patient drug-free treatment, where counselling, group therapy, information or support may be provided. Acupuncture and Vedic medicine may be effective for some groups of people, but large-scale controlled evaluations have not been undertaken.

73. The therapeutic community approach was developed in 1958 with the establishment of Synanon in the United States. Many programmes have developed since and the concept has spread to many countries. Patients are required to live totally within a community for periods ranging from 90 days to several years. They therefore have to cease employment, if employed, and leave their homes and families. The treatment goal is to strip away the fundamental personality characteristics of the addict and to help the recovering person rebuild new behaviours, attitudes and values, in order to maintain lifetime abstinence from alcohol and other drugs and to develop a major orientation of lifestyle.[65]

74. Evaluations of this approach have shown it to be effective for those who complete the programme. However, only a small proportion of addicts are willing to undergo this treatment and there is a high drop-out rate at the beginning of the programme. Additionally, this form of treatment is extremely costly. The two principal factors determining this cost are the length of the treatment and the necessarily high ratio of staff to patients.

4. Rehabilitation

75. Within the secondary prevention approach, treatment and detoxification are sometimes followed by rehabilitation. Rehabilitation is typically for persons who have been through the treatment and detoxification process and is aimed primarily at reintegrating the individual into the community. This aspect of secondary prevention can take on various forms of advice and assistance and can involve skills training and social reintegration. Advice and assistance typically include help in searching for employment and as such have been the focus of efforts by the International Labour Organization. To the extent that rehabilitation may reduce the risk factors associated with the lifestyle prior to drug dependence, it may assist in preventing relapse into illicit drug abuse.

76. Rehabilitation efforts can target drug-dependent persons who have not undergone prior treatment. In these instances, rehabilitation and social reintegration are aimed at restoring the state prior to the onset of illicit drug abuse.[56] However, for other persons, particularly younger illicit drug abusers, rehabilitation and integration may imply attempting to develop a living situation that has not previously been experienced.

IV. RELATIONSHIP BETWEEN PRIMARY AND SECONDARY PREVENTION

A. Participants

77. There is considerable overlapping of secondary prevention with both primary and tertiary prevention. The overlapping with primary prevention exists in so far as many of the programmes and techniques used to try to prevent initiation are also used to attempt to induce cessation among occasional or even frequent illicit drug abusers. The overlap between secondary and tertiary prevention occurs because it is difficult to draw a clear conceptual line between where secondary prevention ends and tertiary prevention begins, as is often reflected in practice. When treatment includes goals other than and in addition to complete abstinence, the treatment encapsulates aspects of tertiary prevention, reducing morbidity and mortality rates among illicit drug abusers; the exclusion of such objectives from secondary prevention reduces cost-efficiency and, in effect, contradicts the principles underlying the health and medical systems of many States.

78. Participants in the development and implementation of primary and secondary prevention policies are from among most sectors of society. The organization or arm of government that takes the lead varies from country to country, but the most successful programmes appear to be those based upon partnerships between different sectors of society. It appears that in working together, the strengths of each reinforce the other. The least effective programmes are those in which different sections of government or government and organizations compete for "ownership" of a problem and the right to determine policy. Inter-agency and inter-organizational cooperation and collaboration, encompassing organizations ranging from the local to the national level, appear to provide the conditions most conducive to the development of effective programmes.

79. Government agencies and organizations, at all levels of representation, are among the more important participants in the development and implementation of prevention programmes. Organizations with a national perspective and structure have advantages in the development of a national plan, which can be tailored to local needs through coordination with regional and local agencies. Such a structure assists in the maintenance of a comprehensive and consistent national perspective while being sensitive to, and being integrated with, local needs, requirements and communities. This is particularly important since the majority of projects and programmes, such as those in schools, are implemented at the local level. While these may be initiated and coordinated at the national level, it is primarily media campaigns that are organized almost solely at the national level.

80. The importance of the relationship between the private sector and the community, together with the role that the private sector can play in the prevention of drug abuse, is being increasingly recognized. The link between the private sector and the community has been facilitated by the United Nations International Drug Control Programme and the International Labour Organization in supporting two international conferences on this subject.* While the interdependence between community, community institutions and the private sector was recognized in many developed States in the nineteenth and early twentieth centuries, problems related to illicit drug use have highlighted this interdependence in recent years.

81. The importance of the community in drug abuse prevention is emphasized in the note by the Secretariat on basic principles of demand reduction (E/CN.7/1995/4). There are numerous examples of effective community responses to the drug abuse problem and various texts on how this has been achieved.[66] Ultimately, the drug abusers are someone's children, someone's neighbours, someone's friends, and they live in a community. The individual, his or her immediate social circle and the community all feel the impact of illicit drug abuse. The importance of community responses through partnerships with a range of agencies and organizations has been emphasized. The community on its own has a limited role, mainly because of

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*See the report of the Secretariat on regional cooperation in demand reduction (E/CN.7/1996/7).

a lack of resources or power, but it should be regarded as a vital and essential partner if the problems of drug abuse are to be dealt with.

82. Much work in the community is achieved by non-governmental organizations.[67] These are the organizations usually most in touch with what is happening in the community by virtue of actually working there. The broad policy framework may be articulated at the national level but needs to be adapted to local conditions, with local implementation.[68] This may be done by many different organizations, including State-controlled ones, but the bedrock of success is working together in implementing the policy.

83. Parents are extremely important participants in the prevention of drug abuse, especially primary prevention. They can be reached through the schools, through community activities and through workplace programmes. There is evidence to suggest that programmes for parents should be an integral part of the education process and not separate extracurricular efforts.[69]

B. Settings

84. The role of the media in the prevention of drug abuse is twofold. The first role is that of direct use of campaigns, typically by government, to increase public awareness of a problem. The media may also cover events that publicize the problem, such as the presentation of findings of an assessment of the drug abuse situation. Both can serve as means of presenting the extent and nature of the problem to the public, which in turn might lead to a sympathetic or accepting attitude towards the spending of funds for the prevention of primary abuse and the provision of services to those with a drug abuse problem. The media can also be a source of information about drug abuse. This role, may, however, be undermined if inaccurate information is given out. It has been suggested that, in different spheres of public life, the media sometimes assists in generating exaggerated caricatures of behaviour perceived to be deviant.

85. The role of schools in providing drug education programmes, as part of a broader, healthy lifestyle programme, as well as alternative activities for pupils, has already been examined. School facilities, however, may often be utilized outside the core school time by other members of the community. Building bridges between the school and the community often helps to reinforce the activities of both.

86. In many countries youth organizations are active in the area of drug prevention and often provide valuable contributions towards alternative activities for young people. Religious organizations may also play a role in prevention, and many are particularly involved in the area of treatment.

87. The opportunity to use the workplace as a setting for drug abuse prevention programmes has only relatively recently been widely acknowledged, particularly since the private sector has become more actively involved in both workplace programmes and joint activities with their local communities. The advantage of using the workplace as a setting is not only to deal with the potential and actual drug abuse problems of the workforce, but also to use the workplace as a channel to reach the workers' families. Many companies now operate employee assistance programmes, which focus not only on the worker but also on his or her family. Many workers may not have drug abuse problems themselves, but have such problems in their families. Because such problems often affect worker productivity and it is to the advantage of the employer to deal with them. The programmes also reach out into the community and seek to mobilize, support and reinforce community action, following the principle of the integration of programmes, thereby making each other more effective.

88. New approaches are being developed such as the outreach-assisted peer-support models of group interaction, an innovative strategy to help addicts on the street, control, reduce or stop their abuse of drugs.[70] This is a development of the community outreach models which have been used for some time to try to reach drug abusers who are not in treatment.

89. In many jurisdictions courts have the option to pass non-custodial sentences on drug abusers. This was discussed by the Commission on Narcotic Drugs at its thirty-eighth session in connection with the report of the Secretariat on alternatives to conviction or punishment (E/CN.7/1995/6). Evidence suggests that this is an effective way to reduce drug abuse if it is combined with supervised aftercare and objective monitoring.[71] Civil commitment was found "useful for bringing addicts into treatment, but it is not treatment and cannot take the place of treatment".[72]

90. Custodial institutions house an increasingly large number of persons convicted for drug-related offences, many of whom use drugs illicitly, and some of whom are drug-dependent. This poses particular problems, not only for the institutions in terms of prison discipline, but also for other inmates who may be introduced to drugs for the first time while in prison. This is true for many regions in the world: in particular, it was noted by States in the Americas in the annual report questionnaire, where one State reported that up to 80 per cent, with a minimum of 30 per cent, of inmates were estimated to continue to take drugs illicitly (E/CN.7/1996/5, paras. 46 and 47). For many institutions there is an opportunity to educate inmates, to counsel infrequent drug abusers and to treat drug-dependent persons. The opportunity to intervene in primary and secondary prevention is not undertaken in most custodial institutions because of the scarcity of resources. It is arguable that this constitutes a lost opportunity. Within a closed community such as a custodial institution, policies designed to educate, counsel and provide treatment could, if properly targeted, achieve a lasting impact. Without such policies, it is likely that an increasing number of those being released from prison will have drug problems, including those whose introduction to drug abuse will have taken place in prison. These and issues relating to the interaction between the volume of drug-related offenders, scarce criminal justice resources, and sentencing and penal policy are constantly under review by many Governments. It is hoped that a coherent strategy to deal with these problems will be forthcoming.

V. CONCLUSION

91. Considerable theoretical and empirical knowledge has developed in relation to primary and secondary approaches over many years. Fundamental to the development of this knowledge base has been the significant advances made towards an understanding of the methodological issues relating to the measurement of the effectiveness and impact of prevention measures, both those measures implemented individually and those implemented in combination with others. In addition, the furthering of an understanding of risk factors related to illicit demand, notably the correlates of initiation, has played an important role in the development of this knowledge base, though correlates of the processes leading to continuance, the development of dependence, harmful abuse and cessation are less well developed.

92. Extensive research and evaluations of the range of primary and secondary prevention activities in different countries and aimed at different segments of the population have led to a surprisingly concordant range of findings and conclusions. The independence of programmes developed and conducted in different States lends a high degree of confidence to those findings and conclusions that can be drawn. However, this does not mean that approaches do not need to be individually tailored to local circumstances. The picture of results that emerges with respect to the impact and effectiveness of strategies and approaches is, as would be expected, a mixture of results, with some approaches proving more effective than others.

93. The process of synthesizing the available information relating to primary and secondary prevention demonstrated the benefit to be derived from integrating these approaches with those of tertiary prevention, since the three lie on a continuum both in principle and in practice. Many States have developed an integrated and balanced approach utilizing aspects of primary, secondary and tertiary prevention. In many areas of implementation, particularly in relation to gaining credibility among the target population and focusing resources upon those groups where they are most required, the connection and mutually reinforcing relationship between the approaches are apparent.

94. Primary prevention approaches include public awareness campaigns, perinatal and pre-school developmental interventions, in-school education, youth programmes and drug testing. Secondary prevention includes reducing illicit demand through different forms of treatment and rehabilitation. The theoretical and empirical evidence available suggests that the efficacy of primary prevention is being called into question, while there appears to be evidence that secondary prevention can reduce demand, and result in cessation, under some conditions. While they have a high relapse rate, many aspects of secondary prevention approaches have been shown different in studies to be cost-effective, and there is some evidence suggesting that some treatment approaches may be more cost effective than supply reduction approaches to reducing illicit demand. However, the relatively limited information regarding cross-strategy comparative examinations, while a potentially rewarding avenue of investigation, means that at present it cannot be stated as a firm conclusion regarding the state of knowledge.

95. The present report demonstrates that, though diverse in coverage and methodology of both implementation and evaluation, there have been many recent developments in the knowledge base regarding primary and secondary prevention approaches. The mixture of results, which show differences between the various approaches with regard to their impact and cost-effectiveness, is as would be expected given the range and diversity of approaches covered.

Notes

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